



## Original communication

## Analysis of risk factors of dowry death – A south Indian study

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## ARTICLE INFO

## Article history:

Received 4 April 2012

Received in revised form

12 July 2012

Accepted 2 September 2012

Available online 16 November 2012

## Keywords:

Dowry death

Victim

Joint family

Intentional death

## ABSTRACT

Dowry deaths in the newly married brides are a burning problem of southern India. The objective of the current study was to identify the risk groups. This prospective study was carried out on 140 cases. Results revealed that majority of the victims (83%) were young aged between 18 and 26 years, childless (65.7%) and mostly died within 4 years of marriage (77.2%). About 80% of the victims were illiterates (53%), house wives of rural background (62.9%) and from middle socio-economic group (81%). Husband alone or along with in laws (75%) and joint family (85%) were mainly responsible for death. The common causes of death implicated are hanging, burning and poisoning. Mostly the place of occurrence was in-laws house. Suicidal deaths accounted in 57% and the rest being homicide. At the end some potential risk factors and their remedial measures suggested.

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## 1. Introduction

Dowry is a custom where money and property is brought by a woman to her husband when they marry. The oldest available records, such as the Code of Hammurabi also describes dowry as an already-existing custom.<sup>1</sup> This customary practice covers the entire gamete of many Asian countries, including Bangladesh, India, Pakistan and Sri Lanka; reiterating the fact that even though the fiery magnitude is on a decline, nevertheless this ugly custom is still prevalent in these countries especially in India.

The common tradition in the Indian Hindu society of presenting household articles to their daughters on getting married has begun to take the shape of the ugly dowry practice due to greed and male chauvinism. This practice of dowry today has ransacked every aspect of morality taking toll on innocent girls in form of dowry torture in general and dowry death in extremes. Thus, this heinous crime is perpetrated by the society, people from different walks of life contributing to it.

Dowry deaths (304B Indian Penal Code) are the deaths of young women within 7 years of marriage, who are murdered or driven to suicide by continuous harassment and torture by the husband and in-laws in an effort to extort an increased dowry. The incidents of

dowry deaths are really heart breaking and extremely sorrowful. It has affected people from all sections of the Indian society and has caused havoc in the lives of millions of Indians. The custom has not spared people from any walk of life irrespective of caste and creed. This heinous custom is gradually engulfing the entire country. To combat this, Government of India brought strict legislation and prohibited payment of dowry under the 1961 Dowry Prohibition Act in Indian civil law and subsequently by Sections 304B and 498-A of the Indian Penal Code (IPC). Despite all these anti-dowry laws in India, it is still rampant and entrenched and over the years the incidence is on an alarming rise well supported by the statistics brought out annually by the National Crime Records Bureau (NCRB). As per NCRB, the incidence of dowry deaths was 6995 during the year 2000 has gone up by over 20.0% in 2010 (8391) with 0.1% increase over the previous year (8383). Although the incidence of dowry deaths shows a regional variation inside the country, the highest rate being reported from the state of Bihar (1.3) against the National rate of 0.7.<sup>2</sup>

Detailed investigation into the cause of death, nature of death, the epidemiological factors and analysing circumstances, can only throw light upon the whole problem and help in preventing such incidents in the future. Not much research in this aspect had been undertaken in Indian subcontinent in comparison to its magnitude. However some notable researchers<sup>3–18</sup> who carried out the study on dowry deaths have pointed out many risk factors with varied results, which need further exploration. As such no candid research has been undertaken in this region on this burning issue. Therefore

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keeping the above perspective in mind, this study was carried out to evaluate and analyse all possible parameters pertaining to deaths in 'newly married women' of this region, to identify precipitating factors responsible for such unnatural events and to suggest remedial measures in order to prevent such untimely unnatural deaths, dowry deaths.

## 2. Materials and methods

This prospective study was carried out in the Department of Forensic Medicine and Toxicology, MKCG Medical College, Berhampur, India over a period of 2 years starting from 1st Aug 2007 to 31st July 2009. This center receives cadavers from Berhampur city as well as adjacent southern part of Odisha, India comprising an approximate population of 3, 00,000.

Out of a total number of 2840 medico legal cases subjected to autopsy during this period, 140 established cases of dowry deaths were taken as study material, following the different exclusion and inclusion criteria. Some deaths ascribed under dowry deaths, were not taken into consideration because in such cases the exact cause of death could not be ascertained due to insufficient or improper history, obliteration of findings from advanced decomposition and inadequate findings. Each case was examined at autopsy both externally and internally and analysed for different sociological aspects in a pre-designed proforma. Apart from this, information regarding the circumstances was obtained by interviewing the accompanying relatives, the investigating officers, and related records. The data so evolved was compared with the data of other researchers to substantiate their findings or even to postulate some new findings.

In the present study, all unnatural deaths i.e. accidents, suicides, homicides and sudden deaths constitute medico legal autopsy. Depending on the per capita income of the family prevailing in this locality, the population was categorized into three socio-economic groups. Families' having annual income of rupees less than 0.1 million per annum were grouped as lower, 0.1 to 0.3 million per annum as middle and more than 0.3 million as upper. So also, as per the educational status, the victims were categorized as illiterate, primary (studied up to Std Vth), secondary (Std VIth to Xth) and higher educated ones (beyond Std Xth).

### 2.1. Statistical analysis

The data collected were analysed by Chi-square test. The expected frequencies calculated from the available data are taken as equal distribution and  $p \leq 0.05$  was applied as statistically significant indicating that the frequency of observation is not homogenous.

## 3. Results

Out of a total 2480 cases of medico-legal autopsies, 140 cases were reported to be dowry deaths. It constituted about 20.4% amongst females dying due to any reason whatsoever. Majority of the victims (82.9%) were young aged between 18 and 26 years ( $p < 0.0001$ ) and most of them (77.2%) died within first four years of their marriage. ( $p < 0.0011$ ) All the victims were Hindu by religion with a predominant rural background (62.9%) ( $p < 0.0001$ ) without having any issue at the time of deaths (65.7%) (Fig. 1). Most of the incidents occurred in summer (48.6%) nights (73%) ( $p < 0.0002$ ) and mostly within the matrimonial house (Table 1). On subsequent categorization, it was observed that in 60% of the cases, the fatal incident took place in the in-laws house where the husband resides ( $p < 0.0001$ ). Victims were mostly house-wives, illiterates and chiefly from middle income groups (81.4%) ( $p < 0.0001$ ) (Table 1). Husbands with or without the in laws confirmed to be the

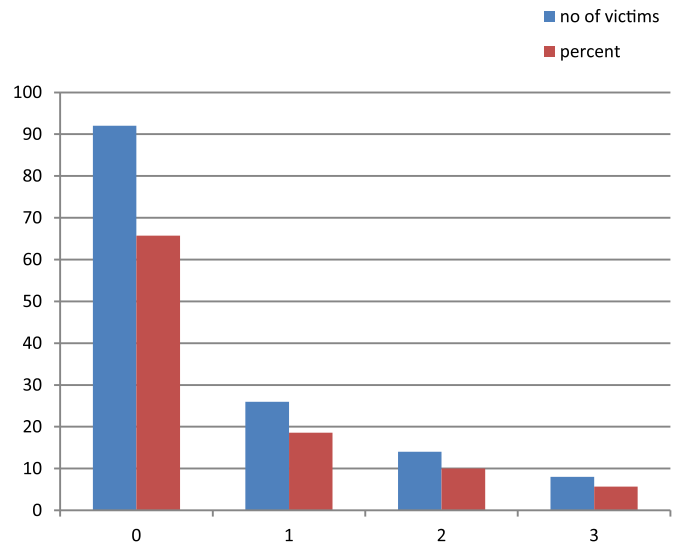


Fig. 1. Number of children of the victims.

suspected offenders in majority of the cases (75%) ( $p < 0.0001$ ) (Fig. 2). In fifty seven percent, nature of death was suicidal ( $p < 0.0001$ ) followed by homicide in 43% of the cases. Hanging, burning (Fig. 3) and poisoning were the three most common causes of death contributing almost equally, amounting to almost 90% of all the cases ( $p = 0.0001$ ) (Table 2). Joint family appears to be an important precipitating factor in most of the dowry deaths (62.8%) ( $p < 0.0026$ ) (Table 1). The principal reason behind an unhappy married life resulting in dowry deaths was mostly due to ill treatment either by husband or by in laws or even by both (62.8%).

Table 1  
Sociological aspects of the victims.

	No. of cases	Percentage
<b>Area distribution</b>		
Rural	88	62.9%
Semi urban	30	21.4%
Urban	22	15.7%
Total	140	100%
$\chi^2 = 27.812$ , d.f. = 2, $p < 0.0001$		
<b>Time of incidence</b>		
Day time (6 AM–6 PM)	38	27.1%
Night time (6 PM–6 AM)	102	72.8%
Total	140	100%
$\chi^2 = 19.714$ , d.f. = 3, $p < 0.0002$		
<b>Occupational status</b>		
House wives	110	78.6%
Unskilled worker	30	21.4%
Skilled worker	0	0%
Total	140	100%
$\chi^2 = 110$ , d.f. = 3, $p < 0.0001$		
<b>Educational status</b>		
Illiterate	74	52.9%
Primary	38	27.1%
Secondary	28	20%
Higher secondary	0	0%
Total	140	100%
$\chi^2 = 40.057$ , d.f. = 3, $p < 0.0001$		
<b>Socio-economic status</b>		
Upper	0	0
Middle	114	81.4%
Lower	26	18.6%
Total	140	100%
$\chi^2 = 76.44$ , d.f. = 3, $p < 0.0001$		
<b>Type of family</b>		
Nuclear	52	37.1%
Joint	88	62.8%
Total	140	100%
$\chi^2 = 14.2$ , d.f. = 3, $p < 0.0026$		

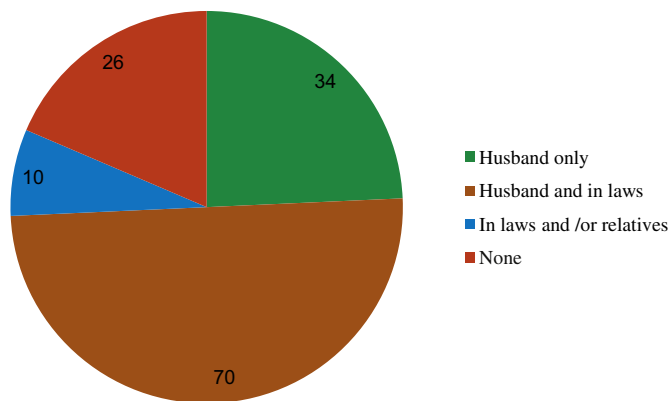


Fig. 2. Suspected offender.

#### 4. Discussion

Dowry is an evil prevailing in this part of the world taking the lives of many innocent females at a very young age. Many factors are responsible for this heinous crime.

A total of 2840 medico legal autopsies conducted during the study period. Dowry deaths represent 4.9% of all the autopsies which in turn constitute 20% of all female deaths. At par with our findings, were the statistics as observed by Srivastava et al<sup>3</sup> in their study at Kanpur, Northern India, but still a higher percentage of 7.2% was reported by Nayak A<sup>4</sup> while studying on the population adjacent to this region. Although, the percentage of dowry death in our area appears comparatively less, year wise analysis of data revealed slight upsurge of dowry deaths over the previous years. The principal reason for all this could be increase in male to female ratio, illiteracy, unemployment and lack of awareness of legislation among people of this region.

Subsequently, analysis of data on age suggests that majority of the victims (82.9%) were young between 18 and 26 years. A similar finding with respect to most frequent age group was

**Table 2**

Methods of death of the victims.

Methods	No. of cases	Percentage (%)
Hanging	44	31.4
Burning	42	30.0
Poisoning	40	28.6
Drowning	02	1.4
Strangulation	02	1.4
Other asphyxia deaths	02	1.4
Others	08	5.7
Total	140	100

$\chi^2 = 64.4$ , d.f. = 6,  $p = 0.0001$

observed by Nayak A.<sup>4</sup> Srivastava et al<sup>3</sup> in their study reported 91% of sufferers in the same age group. Dasgupta and Tripathy<sup>5</sup> detected 85% of burnt wives between age group 16–30 years. So also Ahuja et al<sup>6</sup> reported maximum cases of dowry death in the age group 21–24 years. Verma VCS et al<sup>7</sup> opined 90% of deaths belong to the age group of 16–25 years. While Thiagarajan et al<sup>8</sup> opined that victims were mostly 19–22 years, Rao<sup>9</sup> observed 26% females aged between 19 and 25 Years. Suxena et al<sup>10</sup> observed 60% deaths in females by burn in between 18 and 20 years and 30% in between 20 and 25 yrs. The reason for this type of young age fatality could be mainly due to early marriage along with other associated factors like poverty, illiteracy and lack of emotional and physical support from parents after marriage.

Our study revealed that the majority of the cases (77.2%) occurred within first four years of marriage. Very few cases were observed beyond 26 years of age and above 7 years of marriage. Similar findings were observed by Srivastava et al<sup>3</sup> and Kumar V et al<sup>11</sup> while studying on suspicious deaths in newly married females in northern India. Some other researchers like Kumar V<sup>12</sup> in 2003 and Nayak A<sup>4</sup> in 2005 also detected similar results justifying our study. This high incidence of dowry death at a young age, occurring within few years of marriage could be attributed to reasons like illiteracy, early marriage, infertility and marital disharmony etc.



Fig. 3. Homicidal burn.

Dowry is predominantly a Hindu custom. Justifying this in our study, we detected all the victims dying of dowry deaths belonged to Hindu community, where members of other community like Muslims and Christians also lived in good numbers in this locality. The high involvement of Hindu community could be directly linked to higher Hindu population in this area and prevalence of dowry system in the Hindu community to a greater extent.

So far as the infertility is concerned, it has significant contribution to the intentional deaths in our present study amounting as much as 66% of all victims (Fig. 1). Similar results were also observed by Shah et al.<sup>13</sup> while studying on alleged dowry deaths in this locality but contrary to our findings Kumar V et al.<sup>11</sup> and Nayak A<sup>4</sup> detected quite less number of dowry deaths (50%) in victims having no issue. Childlessness is an age old issue in India, where a lady even for none of her fault suffers a lot by the in-laws and in extreme cases loses her life too. At the same time blaming only the wife for not having any issue, illiteracy and other prevailing regional circumstances are the other major contributing causes for this sort of crimes against women.

In the ongoing study we found most victims (88) from rural background (62.9%) followed by few of urban areas (15.7%) (Table 1). Contrary to our studies a higher percentage of deaths (73%) were observed from rural areas by Kumar V et al.<sup>5</sup> and Batra AK<sup>14</sup> (75%). Studies undertaken in the past by Shah et al.<sup>13</sup> Nayak A<sup>4</sup> on the victims of this locality observed a high rural affection (77%) at par with other researchers,<sup>5,14</sup> which appears quite high in comparison to our findings. The rural predominance of the dowry deaths may be attributed to factors like low literacy, low socioeconomic status, greater provision of dowry irrespective of the parental status, family pride etc in addition to ignorance of prevailing legislations.

As regards the other demographic parameters like seasonal variation, place of occurrence and time of occurrence, incidence was more in summer (48.6%) and behind closed door of house (50%). On this, a still higher indoor incidence (79%) was detected by Kumar V et al.<sup>5</sup> while studying on hospital deaths. A nocturnal predominance was encountered in majority of the cases in our study amounting to almost 73% (Table 1). Sinha et al.<sup>15</sup> and Nayak A<sup>4</sup> got findings of nocturnal predominance in 68% of cases at par with our findings. But contrary to our study Shah et al.<sup>13</sup> detected a lower nocturnal incidence, 62%. Although no definite cause could be attributed to more number of cases in summer, reasons like loneliness, easy availability of means and no fear of getting caught and above all easy disposal could be the contributing factors for indoor and nocturnal predominance.

In the present study, illiterate and primary educated ones are the major victims amounting to 80% of the cases (Table 1). A similar figure of 82% has been put forth by Dasgupta and Tripathy.<sup>5</sup> Srivastava et al.<sup>3</sup> in their study at Kanpur reported 71% of the victims to be illiterate and primary educated ones while a very high rate (96%) was found in illiterate and under matric group in a study conducted by Sinha et al.<sup>15</sup> Contrary to this, studies conducted at Cuttack by Nayak A<sup>4</sup> and Berhampur by Shaha et al.<sup>13</sup> reported 58% and 56% of bridal deaths from illiterate groups respectively. Remarkably, not a single case of dowry death was encountered from higher educated ones in our study. The reason for higher incidence in illiterate ones could be due to lack of benefits of education like capability for managing stressful life situation, moral values, better understanding and economic freedom etc.

We detected that the housewives were the main sufferers in 79% cases, followed by labourers, under-skilled workers (14%) (Table 1). A very high percentage of dependent non-working women being the sufferers were also revealed by studies undertaken in different corners of India like in northern India by Sakhare et al.<sup>16</sup> (91%), Sinha et al.<sup>15</sup> (95%) and Srivastava et al.<sup>3</sup> (96%) and in south India by Kumar

V et al.<sup>11</sup> (96%). On the other hand, when we analysed the occupation of spouse, we observed that husbands of the victims were either labourers or businessmen (50%) followed by farmers, which exactly matches with the findings of Srivastava et al.,<sup>3</sup> which revealed 50% of the spouses being either unemployed or running a family business. Nevertheless, studies at Cuttack by Nayak A<sup>4</sup> also reported unemployment of husband as a dominant factor in most of the dowry deaths.

Coupled with the above findings, we observed that most of the victims were from middle class (81%) followed by low socioeconomic class (19%), and not a single case from upper socioeconomic class (Table 1). Similar findings of predominant middle class involvement was reported by Srivastava et al.<sup>3</sup> (85%), Ahuja in Jaipur<sup>6</sup> (90%) and Kumar V in southern India,<sup>11</sup> (90%) whereas a lower incidence of (56%) was detected by Nayak A<sup>4</sup> in their study at Cuttack.

From these findings, it can be well said that employment and a higher income of the family matters a lot in the prevention of dowry deaths. Very few cases stemmed from low socioeconomic group, the reason, their wants being limited. No cases from the upper strata of society suggest that their wants were mostly fulfilled. Maximum cases hailing from middle socioeconomic group shows their needs are many but the fulfilment is less; so the in-laws in this group always want more dowry from the bride's parent to fulfil their own needs and desire and lack of which results in intentional death of the poor victim.

Sixty percent of the victims' death took place in the in-laws house whereas 37% occurred in the home where she stayed with her husband. Exactly similar findings were reported by Sinha et al.<sup>15</sup> in their study. However, a slightly higher incidence of death in in-laws house (73%) and a lower incidence in her husband's house (27%) were found in another study by same researchers subsequently. Bhullar DS et al.<sup>17</sup> in their study detected 60% bridal deaths in the in-laws house which is almost similar with our findings while a study at Cuttack by Nayak A<sup>4</sup> detected a very high rate of deaths (85%) at the in-laws house. The reason for this could be high expectations and no protection by family members, coupled with less support, mainly from the husband who depends on bride money for his day to day activities.

Further, in our study, we observed that the husband and the in laws were responsible for victim's deaths in 75% cases (Fig. 2). In contrast, a slight higher role of husband or his relatives (79%) in causation of deaths of the victims were observed by Bhullar DS et al.<sup>17</sup> and by Sinha et al.<sup>15</sup> A study on mortality of married women by burns by Batra AK<sup>14</sup> reported that in 32% of deaths due to burn injuries, the in laws were involved. The role of husband and in laws appears to be dubious and act mostly as perpetrators of dowry death. The reasons could be attributed mainly to illiteracy, prevailing local custom, low and inequality in socioeconomic status resulting in high financial expectations from bride and her family even after many days of marriage leads to marital disharmony and premature bridal death.

As per our study, joint family appears to be an important precipitating factor in most dowry deaths (62.8%) (Table 1). Similar findings of a joint family being the predominant factor in cause of death was also observed by Sinha et al.<sup>15</sup> (four times than that of nuclear family), Srivastava et al.<sup>3</sup> (73%), Kumar V et al.<sup>11</sup> (76%) and by Nayak A<sup>4</sup> (three times that of nuclear family). Further, Shaha et al.<sup>13</sup> in their study reported that in 83% of homicides, victim used to stay in a joint family which is almost similar to our view of 85% homicidal deaths in joint family and the rest being suicidal deaths (60%). This confirms that living in a joint family has become a curse for the newly married bride, reasons being too much of interference, high expectations, non compliance, easy planning and execution of these crimes by all members. In addition to all this, the role of the husband appears dubious and could not be ignored either.



Analysis of data regarding the cause of death revealed that, the common adopted methods were hanging, burning and poisoning comprising almost 90% of the cases (Table 2), the nature being suicidal in 57% cases followed by homicide in 43% of cases. Besides these the other methods which are especially reported for homicide are drowning and strangulation. Similar findings were elicited by Srivastava et al<sup>3</sup> at Kanpur wherein they reported burning, hanging and poisoning in 86% of dowry deaths, 50% being suicidal and 25% homicidal. In contrast Sinha et al<sup>15</sup> reported burning, hanging and poisoning in 84% of dowry deaths, of which 78% were homicidal and 22% suicidal. Consistent with our findings, a study in the present institute by Shaha et al<sup>13</sup> reported burns as the commonest means of homicide in dowry deaths. Similar studies conducted by Ghadially et al<sup>18</sup> and Bhullar DS et al<sup>17</sup> reported burns as the main cause of death followed by poisoning in 60% and 70% cases respectively. With respect to nature of death, he subsequently opined that 13% were homicidal and 24% suicidal. The most important reason for all intentional dowry deaths be it suicide or homicide is poverty. Besides poverty, the other reasons of dowry death appear to be easy availability of means i.e. ligature material, poisonous substance and inflammable oil etc. The commonly used ligature material for hanging was soft broad ligature material like sari, commonly used poisonous substance in poisoning was pesticide/insecticide and the commonly used inflammable oil for burning was kerosene. Further reasons like hindrance in quick transportation to medical care institutions, inadequate treatment because of the belief that the bridegroom is still not their family member, therefore treatment expenditure must be borne by her father and more so lack of desire to help and save the bride in time with a view to extract more dowries from her parents on their arrival, leading to death cannot be ignored too.

The principal reason behind dowry death was disharmonious married life which was mostly due to ill treatment either by husband or the in-laws or even by both (62.8%). Similar finding of unhappy married life in three quarters of the victims (75%) was also detected by Srivastava et al<sup>3</sup> at Kanpur where they found the prime cause of discontent as mounting pressure for dowry by the in-laws and inability to meet the same by the parents in 27% cases. Similarly a study by Tuli et al<sup>17</sup> reported dowry and quarrel to be the common motive behind all intentional deaths of the brides. Ghadially et al<sup>18</sup> detected domestic violence as the principal motive in as many as 78% cases. The reasons for such unhappy married life are varied, of which dowry stands out as the main cause. Ill treatment by the husband and in-laws due to pressure for dowry are quite common in this locality in addition to other factors like illiteracy, poverty, maladjustment etc which result in unhappy married life and ultimately death.

## 5. Conclusion

Dowry death, at present is a burning problem of the Indian society. It is increasing day by day owing to decaying socio-economic fabric and prevailing life style in the family. Dowry deaths have thrown a major challenge to the police personnel, medico legal experts as well as to judicial officers not only to eradicate this social menace but also to penalize the culprits in a deterrent manner.

Our findings reflect that young, childless, illiterate rural housewives married within 2–4 years belonging to low or medium socio-economic group are the common victims. A greedy husband either alone or with other family members in order to establish themselves financially starts torturing the bride from the day of marriage to extract more dowries which over a period of time creates disbelief, marital disharmony and at the end results in untimely death. Deaths are mostly intentional and from joint

families. Hanging, burning and poisoning are the common adopted methods of death. Therefore the role of husband in one hand and the evil of dowry on the other appear to be the major contributors of dowry deaths.

A shift in India's attitude towards weddings is urgently due. Dowry equates to a family paying a man to take their daughter's hand in marriage. The man with his family works to extract the maximum price for 'taking' the woman, in ways that can scar lives and damage the institution of marriage. A practice that conflates its women with gold, silver and furniture is absolutely reprehensible. Simply having anti dowry laws has proved hugely inadequate. Emphasis needs to be put on enforcement. The need of the hour is an integrated approach to the symptoms of adjustment problems, increasing awareness amongst the fairer sex of human genre to lead a dignified means of living, stricter implementation of laws and regulations to contain the devilish social custom and its usages developing a wider range of preventive strategies and above all the empowerment of women on social, political and economic arenas.

### Ethical approval

None.

### Funding

None.

### Conflict of interest

None.

## Acknowledgement

We are thankful to Dr Abarnita Sethi and Dr Sujana Kumar Mohanty for their help and guidance during the preparation of this manuscript.

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